

Title Lignin content and stem bending incidence on cut gerbera flowers
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Citation ISHS Acta Horticulturae 847:377-384. 2009.
Keyword BHT; lignifications; PAL; phenols; postharvest

Abstract

The stem bending or break is the main postharvest disorder in cut gerbera flowers. Factors involved on stem bending incidence are several and are still under investigation. The genetic background seems to be the major factor in preventing stem bending. The stem biochemical composition, in particular, lignin content is directly involved in stem bending. The aim of this work was to evaluate the effect of lignin biosynthesis promoters and inhibitor on cut gerbera stem bending. Cut gerbera flowers were obtained from local growers and immediately transferred to postharvest evaluation room. They were screened and selected in order to have homogenous samples. Chemical compounds were applied as pulse treatments for 24 h using 150 or 300 μM acibenzolar-s-methyl (BTH) or 800 μM α -aminooxi- β -phenylpropionic acid (AOPP). During postharvest life the vase life, the stem bending incidence, PAL activity, total phenols and soluble lignin content were measured. Results showed that total phenols and PAL activity were higher in the cultivar that showed lower stem bending incidence. Unfortunately the BTH and AOPP were ineffective. BTH concentrations used to show phytotoxicity symptoms and did not positively affect lignin content in gerbera stems.